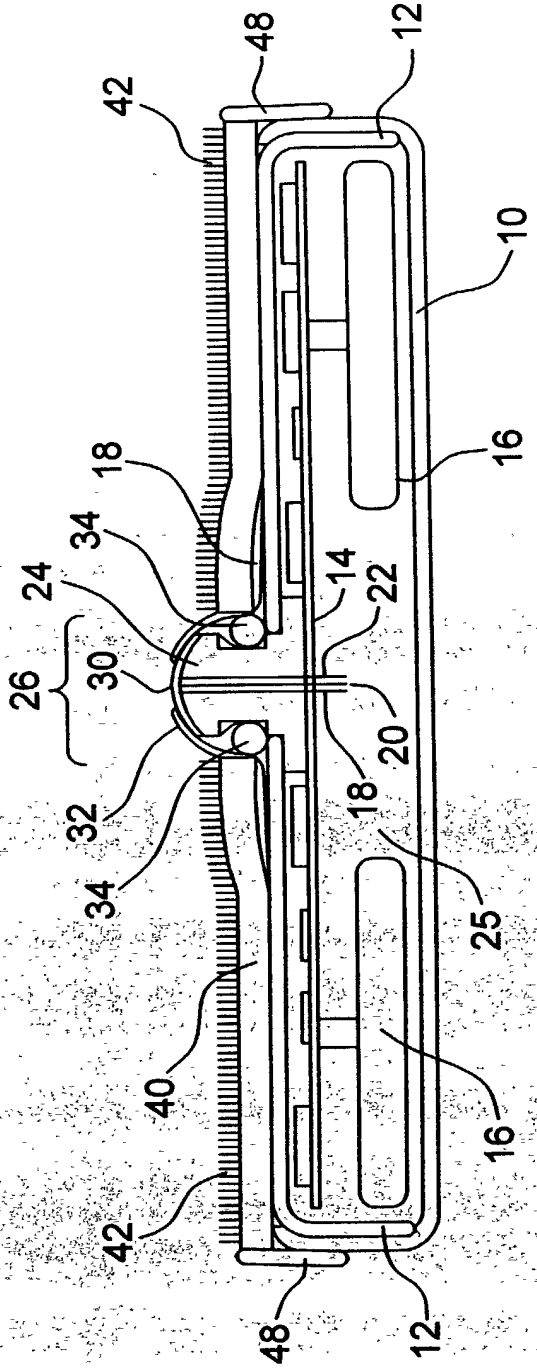

Figure 1

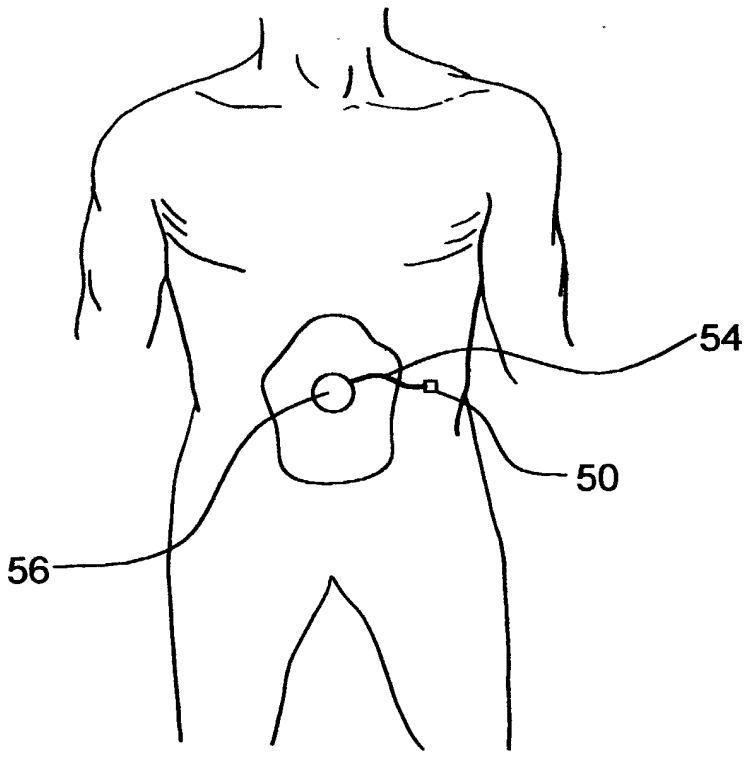

Figure 2

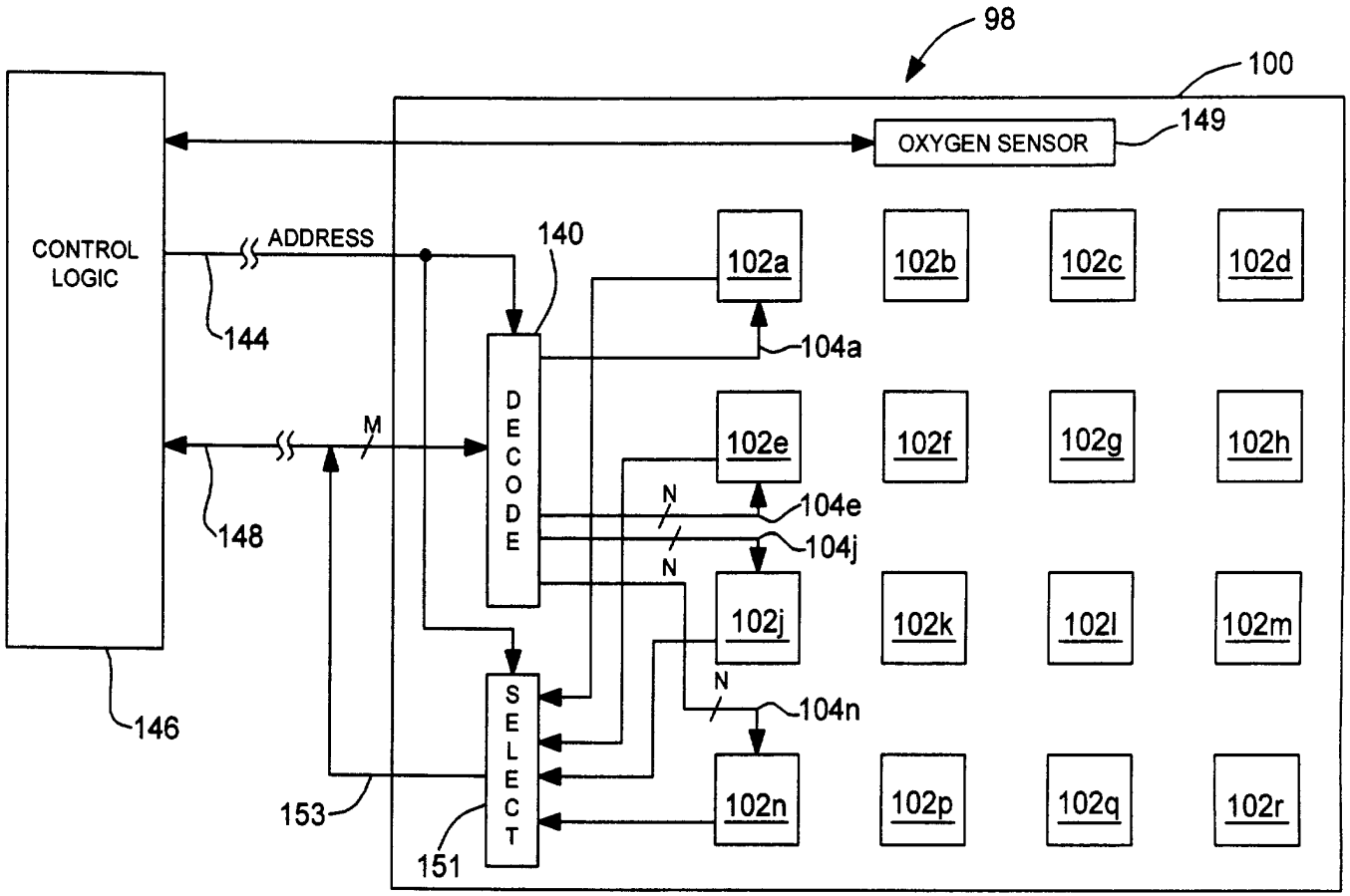

Figure 3

2009/126879 PCT/US2009/040077

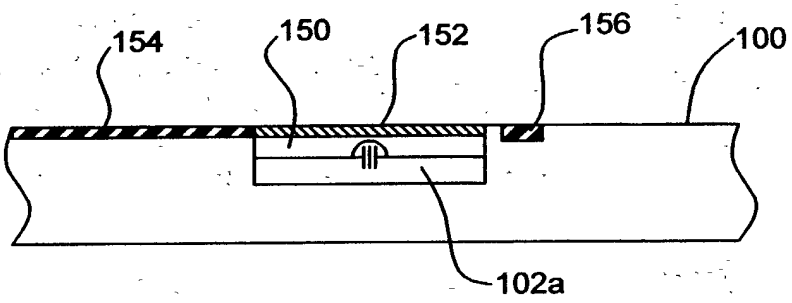

Figure 4A

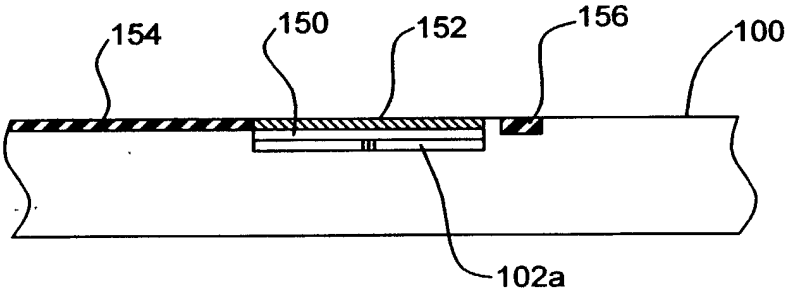

Figure 4B

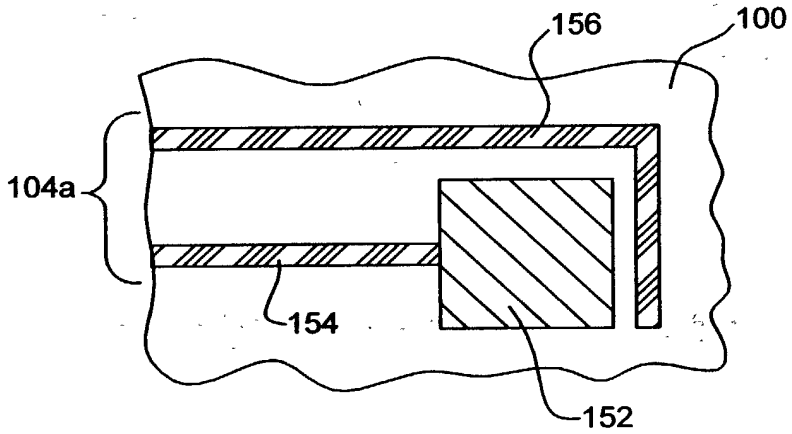

Figure 5

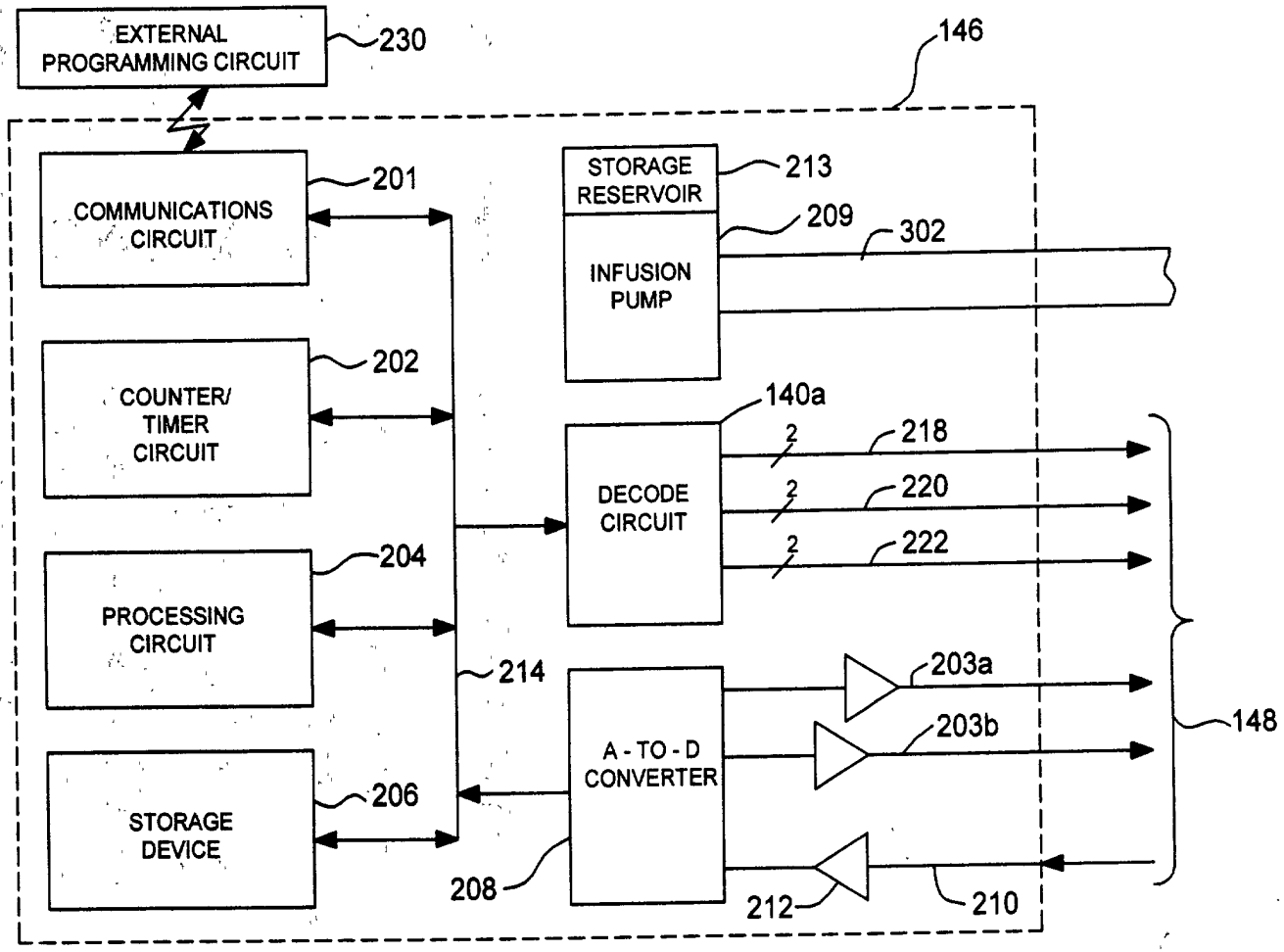
EXTERNAL PROGRAMMING CIRCUIT
230
146
COMMUNICATIONS CIRCUIT
201
STORAGE RESERVOIR
213
209
INFUSION PUMP
302
COUNTER/ TIMER CIRCUIT
202
140a
DECODE CIRCUIT
2
218
2
220
2
222
PROCESSING CIRCUIT
204
214
A-TO-D CONVERTER
203a
203b
148
STORAGE DEVICE
206
208
212
210

Figure 6

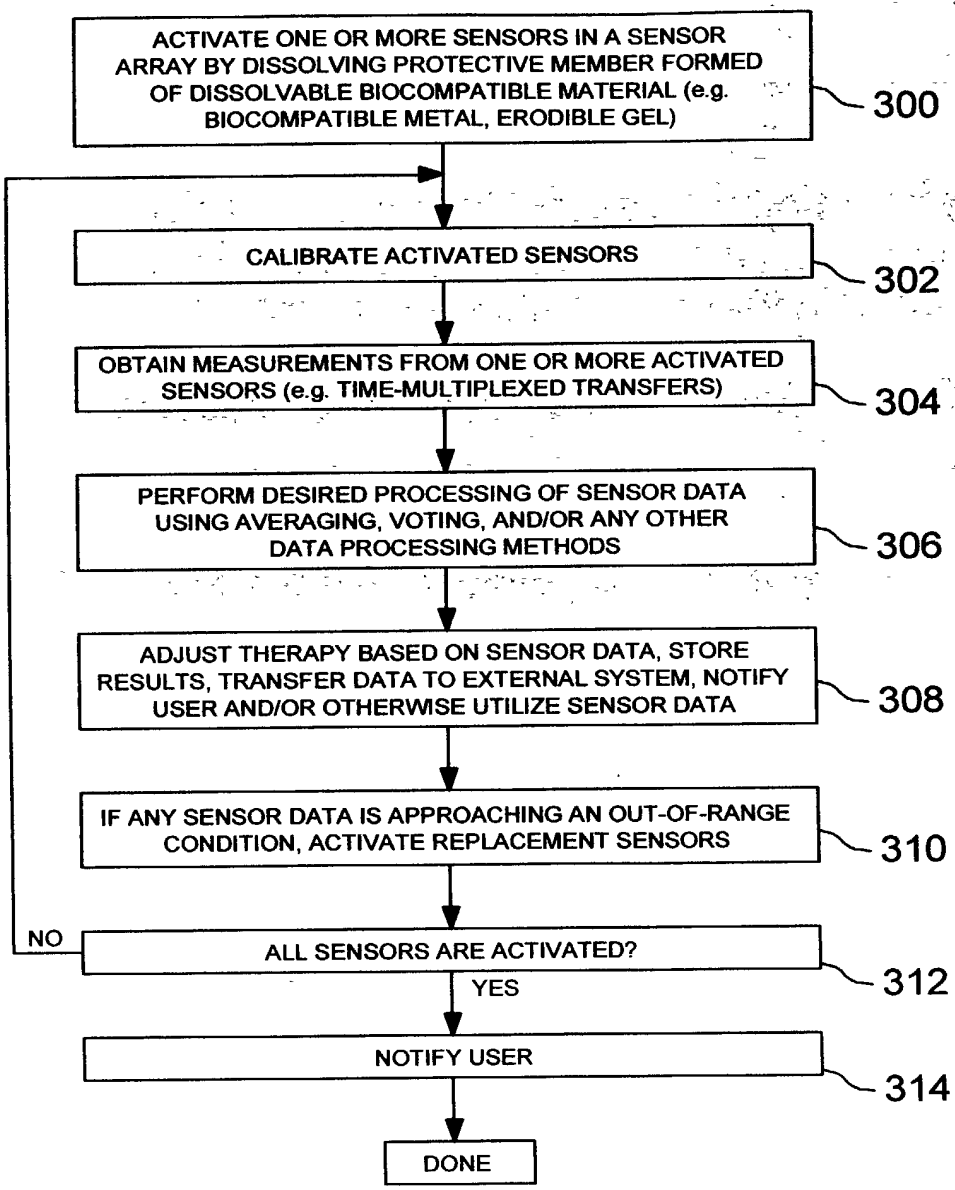
ACTIVATE ONE OR MORE SENSORS IN A SENSOR ARRAY BY DISSOLVING PROTECTIVE MEMBER FORMED OF DISSOLVABLE BIOCOMPATIBLE MATERIAL (e.g. BIOCOMPATIBLE METAL, ERODIBLE GEL)
300
CALIBRATE ACTIVATED SENSORS
302
OBTAIN MEASUREMENTS FROM ONE OR MORE ACTIVATED SENSORS (e.g. TIME-MULTIPLEXED TRANSFERS)
304
PERFORM DESIRED PROCESSING OF SENSOR DATA USING AVERAGING, VOTING, AND/OR ANY OTHER DATA PROCESSING METHODS
306
ADJUST THERAPY BASED ON SENSOR DATA, STORE RESULTS, TRANSFER DATA TO EXTERNAL SYSTEM, NOTIFY USER AND/OR OTHERWISE UTILIZE SENSOR DATA
308
IF ANY SENSOR DATA IS APPROACHING AN OUT-OF-RANGE CONDITION, ACTIVATE REPLACEMENT SENSORS
310
NO
ALL SENSORS ARE ACTIVATED?
312
YES
NOTIFY USER
314
DONE

Figure 7